NOTES ON INORGANIC CHEMISTRY.

FURTHER studies of hydrozoic acid, HN_3, are given in the *Journal für praktische Chemie* by Professor Curtius and Dr. Rissom. All of its salts as far as known are anhydrous. Lithium hydrazoate explodes violently on heating, and thallium hydrozoate detonates by percussion; the other hydrazoates of the alkalies and alkaline earths are comparatively stable. When they are heated carefully in small quantities in thin glass tubes they decompose quietly with evolution of nitrogen and the metal is left in a pure condition. This is pointed out as being the easiest method of preparing small quantities of barium, strontium and calcium. In the light of Moissan's recent researches, it would be interesting to know if the residual substance on heating calcium hydrozoate is really metallic calcium, or calcium nitrid, which might readily be formed under these circumstances. The authors further find that a solution of the free hydrozoic acid decomposes to some extent on heating with dilute mineral acids, hence the amount of free acid obtained in this way from the salts is much less than the theoretical.

AN interesting synthesis from acetylene has been accomplished by Berthelot, according to the *Comptes Rendus*. Acetylene is led into fuming sulfuric acid, and the potassium salt of the acid thus formed is fused for a short time at 200° C. On acidification and distillation, phenol is easily recognized. This synthesis is peculiarly interesting from the fact that it is accomplished at such a low temperature.

THE work of Hantzsch and of others on the reactions of inorganic salts in other than aqueous solutions, and especially in solutions of non-electrolytes, is bearing much fruit in enabling the preparation of new inorganic compounds. Hantzsch has just described, in the *Zeitschrift für anorganische Chemie*, the disulfid of silver Ag_2S_2, corresponding to the recently discovered dioxid, Ag_2O_2. It is readily precipitated from a solution of silver nitrate in benzonitril, on adding a solution of sulfur in carbon bisulfid. It is a brown amorphous powder, insoluble in ordinary solvents, melts at a fairly high temperature, but rapidly decomposes, and oxidizes with great rapidity in the air when moist or in water. Other solvents, including pyridin, were tried in its preparation, but benzonitril was the only one found in which the disulfid could be formed.

J. L. H.

ZOOLOGICAL NOTES.

PROFESSORS W. C. HERDMAN and Rupert Boyce have presented to the Royal Society a further study of Oysters and Diseases (published in *Nature*), from which we take the following:

Although we did not find the bacillus typhosus in any oysters obtained from the sea or from the markets, yet in our experimental oysters inoculated with typhoid we were able to recover the organism from the body of the oyster up to the tenth day. We show that the typhoid bacillus does not increase in the body or in the tissues of the oyster, and our figures indicate that the bacilli perish in the intestine.

Our experiments showed that the sea-water was inimical to the growth of the typhoid bacilli. Although their presence was demonstrated in one case on the twenty-first day after addition to the water, still there appeared to be no initial or subsequent multiplication of the bacilli.

In our experiments in washing infected oysters in a stream of clean sea-water the results were definite and uniform; there was a great diminution or total disappearance of the typhoid bacilli in from one to seven days.

The colon group of bacilli is frequently found in shell-fish as sold in towns, and especially in the oyster; but we have no evidence that it occurs in mollusca living in pure sea-water. The natural inference that the presence of the colon bacillus invariably indicates sewage contamination must, however, not be considered established without further investigation.

The colon group may be separated in two divisions: (1) those giving the typical reactions of the colon bacillus, and (2) those giving corresponding negative reactions, and so approaching the typhoid type; but in no case was an organism giving all the reactions of the *B. typhosus* isolated. It ought to be remembered, however, that our samples of oysters, although of various kinds and from different sources, were in no case, so far as we are aware, derived

from a bed known to be contaminated or suspected of typhoid.

We have shown also the frequent occurrence, in various shell-fish from the shops, of anaërobic spore-bearing bacilli giving the characteristics of the *B. enteriitidis sporogenes* recently described by Klein.

As the result of our work, we make certain recommendations as to the sanitary regulation and registration of the oyster beds, and as to quarantine for oysters imported from abroad.

CURRENT NOTES ON ANTHROPOLOGY.

ETHNOGRAPHY OF LIBERIA.

IN *L'Anthropologie*, for August, the French Consular Agent at Monrovia, M. Delafosse, gives a sketch of the present ethnography of Liberia. The colored immigrants from the United States, usually with more or less white blood in their veins, have mixed indiscriminately and largely 'de la main gauche' with the native inhabitants. They form a parti-colored population, not of a promising character. The indigenous languages belong to four stocks, the Mande, the Kru, the Gola and the Guele, the last mentioned being that of the cannibal tribes on the southeast. The original people of this part of the coast were the Dé, who were related to the Kru tribes and those of the Ivory Coast. The Vei belong to the Mande (or Mandingo) stocks, and are interesting as using a peculiar syllabic alphabet, first observed by Lieutenant Forbes, U. S. N. M. Delafosse says that it was not their invention, as has been stated, but was borrowed by them from some tribe near the source of the Niger.

THE SIGNIFICANCE OF SKULL-MASKS.

THE use of skulls, or imitations of them, as masks, was not uncommon in America, and is quite frequent in Polynesia. Their symbolism and signification are examined by L. Frobenius in the *Internat. Archiv für Ethnographie* (1898, Heft IV.). Rejecting former and incomplete suggestions, he finds this custom arose from that of the adoration of skulls themselves. It is well known that in primitive religion the skulls of men and animals are conspicuous objects of worship, as representing the spirits of the departed. This was connected with the religious homage to ancestors, to deceased chieftains and to the brute eponymous forefathers of the totem. Sometimes the symbolism of the skull in the mask was reduced merely to the insertion of teeth or some such single feature.

THE SVASTIKA IN AMERICA.

THAT a simple figure, like the Svastika, may arise independently, representing quite different objects, is again illustrated by Mr. Wm. W. Tooker in an article in the *American Antiquarian* for December. Among the marks which were tattooed on the backs of the Virginian Indians as totemic designs we find the Svastika, as Mr. Tooker says, 'in full bloom.' In this instance, from other figures given, the design seems to represent four tomahawks crossed in pairs, the blades in opposite directions. But, as Mr. Tooker remarks, "It is a simple figure which, when compared with others of aboriginal origin, might be evolved from an Indian's brain," without evoking the hypothesis of a foreign immigration. As a 'symbol' it has no constant and universal meaning, and the mystical importance which has been attached to it by some imaginative writers has no foundation in facts.

D. G. BRINTON.
UNIVERSITY OF PENNSYLVANIA.

SCIENTIFIC NOTES AND NEWS.

DR. P. L. SHERMAN, formerly instructor in general chemistry in the University of Michigan, has gone with Professor Worcester to the Philippines as his secretary.

DR. I. BORNMÜLLER has gone to northern Persia on a botanical expedition.

THE Berlin Academy of Sciences has made a grant of 2,400 Marks toward the expenses of a botanical expedition to Java by Dr. Paul Knuth.

THE herbarium of Professor Chodat, of the University of Geneva, has been destroyed by fire.

REPRESENTATIVE SAMUEL J. BARROWS, of Massachusetts, will be appointed Librarian of the National Library. This is regarded as an excellent appointment, that will insure the conduct of the Library without reference to politi-